

CLAIMS

1. A positive-displacement pump, in particular for use in machines for dispensing fluids, comprising two elements that are rotatable with respect to one another and which mesh with one another (20, 30), each rotatable element being rotatably mounted in the pump with centred coupling without interference with a corresponding centring body (18, 11a), characterised in that at least one of the two rotatable elements has a plurality of undercut regions (26, 34, 35, 36) at the location of the centring walls, the undercut regions (26, 34, 35, 36) comprising a wall portion which is spaced with respect to the facing wall of the respective centring body, the undercut regions (26, 34, 35, 36) being elongated in the direction of an axis of rotation of the at least one rotatable element (20, 30) about the corresponding centring body (18, 11a).

2. A positive-displacement pump according to claim 1, characterised in that it comprises at least one gear or sprocket (20) mounted rotatably on a pin (18), the central opening of the sprocket (20) comprising portions of centring wall (23) which define the centred coupling of the sprocket 20 to the pin (18) and which alternate with portions of undercut wall (26) spaced from the pin (18).

3. A positive-displacement pump according to claim 2, characterised in that it comprises three portions of centring wall (23).

4. A positive-displacement pump according to claim 1, characterised in that it comprises at least one gear or rotor (30) mounted rotatably inside a cylindrical cavity (11a) and having a peripheral curved surface (31) for defining the centred coupling of the rotor (30) to the

cylindrical cavity (11a), portions of undercut wall or depressions (34, 35, 36) spaced from the cylindrical cavity (11a) being provided on the peripheral curved surface (31).

5. A positive-displacement pump according to claim 4, characterised in that peripheral notches (32) are provided on the cylindrical peripheral curved surface (31) of the rotor (30) and define a plurality of peripheral teeth (33), at least some depressions (34) being provided on the outer face of each peripheral tooth (33), between two adjacent peripheral notches (32).

6. A positive-displacement pump according to claim 5, characterised in that at least second depressions (36) are provided on the cylindrical peripheral curved surface (31) of the rotor, in a position aligned longitudinally with the peripheral notches (32).

7. A positive-displacement pump according to claim 5, characterised in that it comprises an annular depression or chamfer (35) on a portion of the peripheral curved surface (31) remote from the peripheral teeth (33).